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ABSTRACT

This collection of abstracts is part of a continuing series providing information on recent doctoral dissertations. The 14 titles deal with the following topics: the cognitive and perceptual components of children's reading success; the relationship between learning style preference and reading utilization; oral reading strategies used by younger and older mature readers; variables that predict first grade reading skills; factors that affect fifth grade children's attitude toward reading; prose memory of high and low comprehending readers; the relationship between reading achievement and short term auditory memory in black children in compensatory education programs; the neuropsychological correlates of reading disability; word finding skills in learning disabled and normal children; the relationship between Piagetian classification ability and reading comprehension; problems associated with the subject of learning disability; differences in muscle tension between proficient and nonproficient readers; concept atttainment and reading achievement in normal, disadvantaged, and high risk first grade children; and the relationship of cognitive, environmental, and personal factors to the acquisition of reading skills in preschool children. (GW)

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Reading Achievement: Characteristics Associated with Success and Failure:

Abstracts of Doctoral Dissertations Published in Dissertation Abstracts International, January through March 1978 (Vol. 38 Nos. 7 through 9) Part One

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THE RELATIONSHIP BETWEEN LEARNING STYLE PREFERENCE AND READING UTILIZATION

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A PSYCHOLINGUISTIC DESCRIPTION OF THE ORAL READING BEHAVIOR OF MATURE READERS

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AN INVESTIGATION OF THE COGNITIVE, ENVIRONMENTAL AND PERSONAL DIFFERENCES IN THE READING PERFORMANCE OF PRESCHOOL CHILDREN

AN EXPLORATORY STUDY OF THE PERCEPTUAL AND CONCEPTUAL COMPONENTS OF READING SUCCESS OF CHILDREN AGES FIVE THROUGH NINE Order No. 7801372

AGER, Jean Barrington, Ph.D. Bryn Mawr College, 1977. 212pp.

This exploratory study concerned the cognitive and perceptual components of reading success of 126 children of ages five through nine. Three theories were chosen which were considered of value in understanding reading as a developmental task: Piaget's perceptual theory, Eleanor Gibson's discrimination theory and automatic information processing. A common emphasis is the transition from mechanical perception to meaningful reading.

Success in reading was measured by a teacher rating in the case of kindergarteners and by a score on the Gates-MacGinitie Test in the case of older children. There were two independent measures dealt with in terms of the major hypotheses. The cognitive measure was the Farnham-Diggory cognitive synthesis task. The perceptual measure was an error score on the Gibson, Pick and Osser letter-like forms.

A major hypothesis was that in the case of younger children (below age eight) perception would be more closely related to reading success than cognition. This hypothesis was supported by the data. It was also hypothesized that in the case of children of age eight or older, success in reading would be related more to cognitive than to perceptual factors. Due to a ceiling effect of the cognitive measure, this hypothesis was not supported. On the other hand, the fact that the Binet vocabulary score correlated increasingly with reading success suggests that cognitive factors become more important with age.

There were also trends to support the hypothesis that young children (under age eight) who were poor in cognitive synthesis skills could compensate if their perceptual abilities were above average. In the case of older children (age eight or above), there were some who used cognitive skills to compensate for relatively poor perception, but this was not always the case. In general, neither perception nor cognition were of much influence at the older age. It was speculated that other factors such as motivation or experiential skills contribute more at the older age.

There were two additional findings in relation to an optical illusions measure. It was found in this sample that certain optical illusions disappeared with age. These findings are supportive of Piaget's theory. Further, it was shown that ability to compensate for optical illusions may be related to skill in reading comprehension.

THE RELATIONSHIP BETWEEN LEARNING STYLE PREFERENCE AND READING UTILIZATION Order No. 7730385

BAYLISS, Valerie Andrée, Ed.D. Northern Illinois University, 1977. 119pp.

This study investigated the differences in reading utilization and reading achievement when analyzed by learning style preference and sex. In addition the study investigated differences in the utilization of three other knowledge sources when analyzed by learning style preference and sex. These knowledge sources included discussion, listening and/or viewing media, and experimentation.

The sample for the study consisted of 101 females and 118 males enrolled at Southwest Missouri State University during the spring of 1977.

The Learning Style Inventory, developed by Kolb, was used to assess learning style preference. Based on a self ranking of descriptive adjectives, the respondents were classified as one of four learning styles. The Information Source Questionnaire, developed by the examiner was used to assess knowledge source preferences. Respondents preferentially ranked four knowledge gaining sources in twelve described learning situations. A preference index was established by the summation of points assigned to each source. Reading achievement was measured by Form D of The Nelson-Denny Reading Test.

The two way analysis of variance (ANOVA) technique was used to assess differences between the two independent variables, learning style preference and sex and the dependent variables, knowledge source preferences and reading achievement. Five research hypotheses were tested. The conclusions are based on the following findings: 1. There is no relationship between learning style preference or sex and the utilization of reading as a knowledge source preference. 2. There is no relationship between learning style preference or sex and reading achievement. 3. There is no relationship between learning style and the utilization of discussion as a knowledge source preference. There is no relationship between the sex of the individuals in this study and their utilization of discussion as a knowledge source preference. There is, however, a relationship between the utilization of discussion as a knowledge source preference when both the learning style preference and sex of the individuals were considered. A review of the mean table seemed to indicate that females of one style preferred discussion more often than males of the same style, and males of two other styles preferred discussion more often than females of the same styles, while there appeared to be no appreciable difference between the sexes of the fourth style. 4. There was no relationship between learning style preference or sex and the utilization of listening and/or viewing media as a knowledge source preference. 5. There was no relationship between learning style preference or sex and the utilization of experimentation as a knowledge source preference.

Based on the results of the findings it was concluded that there was no relationship between learning style preference and the utilization of reading as a knowledge source preference or reading achievement.

Although the findings of this study did not establish the existence of a relationship between knowledge source preference and learning style preference, the study represented a different approach to the investigation of the question. If one of the goals of reading educators is to encourage the development of reading maturity, then the question of why some individuals choose reading as a knowledge source preference while others do not, should continue to be examined.

A PSYCHOLINGUISTIC DESCRIPTION OF THE ORAL READING BEHAVIOR OF MATURE READERS

BLAIR, Harold Lynn, Ph.D.
Arizona State University, 1977

The purpose of this study was to analyze and compare the oral reading strategies employed by a group of younger mature readers and a group of older mature readers. These reading strategies included graphophonic cues involving the letter symbols and phonemes, syntactic cues involving the grammatical function of words, and semantic cues involving word meanings. The shorter form of the Reading Miscue Inventory (RMI) was used in the analysis of the oral reading miscues. A miscue is an observed response which does not match the expected response. These miscues were analyzed to determine the particular reading strategies employed by the younger and older mature readers.

Twelve younger mature readers and eleven older mature readers from reading classes at Glendale Community College in Glendale, Arizona, comprised the sample in this study. Subjects were selected by mean[illegible] comparable percentile scores of the Nelson-Denny Standardized Reading Test (1960).

The subjects were administered the RMI. The first 25 substitution miscues were coded and analyzed according to the procedures of the shorter form of the RMI. An oral story retelling score was computed for each subject.

Accumulated data of the study were presented through tabulations of frequency counts, rank orders, means, and percentages.

Findings of the data analyses were as follows: 1. Both younger mature readers and older mature readers responded competently to the graphophonic cue systems. 2. The syntactic level of language seemed to be the most important cueing system for both older mature readers and younger mature readers. 3. Older mature readers seemed to possess a somewhat higher ability for comprehension than younger mature readers. 4. Older mature readers showed a much greater confidence for recall information than younger mature readers. 5. Older mature readers and younger mature readers committed about the same number of miscues per 100 words and self-corrections per 100 words.

The study contributed baseline data to the field of miscue research with mature readers. Conclusions revealed that younger mature readers and older mature readers read with much better comprehension than their standardized reading scores indicated and both groups of mature readers sought meaning in their reading in a high percentage of sentences analyzed. The results of the study led to several recommendations for further research. These recommendations included a replication with different samples of mature readers to establish the generalizability of the findings, a replication with a broader cross section of mature readers to confirm the reliability of the findings, and replication using as the text selection a work of non-fiction to test comprehension. Recommendations also suggested that a larger number of substitution miscues be examined for research purposes, and that scores for comprehension based on standardized reading tests be evaluated in the context of recent findings of psycholinguistic research concerning the reading process.

Order No. 77-17,863, 125 pages.

TWO DIMENSIONS OF FIELD DEPENDENCE-INDEPENDENCE: HOW THEY AND NINE OTHER VARIABLES INTERRELATE AND PREDICT SPECIFIC READING SKILLS AT THE END OF THE FIRST GRADE

Order No. 7801693

DERMOTT, Ralph Allan, Ed.D. University of Maine, 1977. 316pp. Adviser: Dodd E. Roberts

This study investigated the relationship among and predictability of field dependence-independence (FD-I), mental ability, reading readiness, selected reading readiness factors, and learning ability on specific reading skills in first grade.

The subjects were 241 first grade pupils randomly selected from the schools of Bangor, Maine. The instruments used were the following: Metropolitan Readiness Test, Form A, First Grade Screening Test, Otis-Lennon Mental Ability Test, Elementary I, Portable Rod-and-frame Apparatus, Children's Embedded-figures Test, criterion-reference tests taken from the Metropolitan Achievement Tests, Primary I and II, Restricted Edition, 1975. Stepwise multiple regression, Pearson product-moment correlations, and t tests for uncorrelated data were used.

The following is a brief summary of major findings: (1) Reading readiness is the best predictor of specific reading skills for children regardless of sex or reading approach. Learning ability is equal to or slightly better than reading readiness for predicting the phoneme/grapheme relationships of vowels for first graders. (2) Reading readiness is a better predictor of specific reading skills for girls than for boys and for children in a basal program than for children in an intensive-phonics program. (3) When selected reading readiness factors are substituted for total reading readiness in the regressions, knowledge of alphabet letter names is usually the best predictor of decoding skills and is better for girls than for boys. Ability to identify numbers is the best predictor of specific reading skills involving meaning clues. (4) Some of the independent variables which enter the regressions beyond the first step are statistically significant; however, the increases in variance are too small to be of practical significance. (5) Apparently, reading readiness (especially knowledge of alphabet letter names and the ability to identify numbers) is a more important predictor of specific reading skills than mental ability. (6) Knowledge of alphabet letter names is generally as good a predictor of decoding skills as is total reading readiness; and the ability to identify numbers is generally as good a predictor of those specific reading skills involving meaning clues as is total reading readiness. (7) The embedded dimension of FD-I is a better predictor of specific reading skills than the vertical; however, both are poor predictors of reading skills. (8) The importance of FD-I lies only with the difficulty a poor reader may be having in discriminating parts inside of wholes. There may be problems in disembedding with (a) children learning decoding skills more than skills involving meaning clues, (b) girls more often than boys, (c) boys learning sounds at the end of words and suffixes, (d) children in an intensive-phonics program, especially when working with sounds at the end of words, and (e) children in a basal program when the teacher supplements instruction on vowels. (9) The greater the correlation between the embedded dimension of FD-I and specific reading skills, especially decoding skills, for first grade children, the smaller the correlation between the embedded and vertical dimensions of FD-I. Apparently, drill on decoding in an intensive-phonics program affects the ability to disembed to the degree that the relationship between the two dimensions of FD-I is diminished. Sex may be a factor in this diminution and needs further study. (10) In the first grade, boys tend to be more field-independent than girls. (11) Boys in a basal program supplemented with phonics learn specific reading skills about as well as boys in an intensive-phonics program.

THE RELATIONSHIP BETWEEN FIFTH GRADE CHILDREN'S ATTITUDE TOWARD READING AND FACTORS SUCH AS SUCCESS OR FAILURE IN READING, INTELLIGENCE QUOTIENT, SEX, GRADE RETENTION, LEVEL OF GRADE RETENTION, AND SOCIOECONOMIC STATUS

Order No. 7801996

DOTSON, Mary Margaret Selvidge, Ed.D. The University of Tennessee, 1977. 109pp. Major Professor: Dr. J. Estill Alexander

The purposes of the present study were to determine if a significant relationship existed among reading attitude and factors such as success or failure in reading, intelligence quotient, sex, grade retention, level of grade retention (if any), and socioeconomic status.

The subjects included 332 fifth grade children in the Blount County school system. The children used in the study were those who chose to participate and who were able to acquire parental permission. The Heathington Intermediate Attitude Scale was administered to all participating fifth grade students. The remainder of the data relevant to the study were acquired from the students' cumulative records and included a grade equivalent score determined by the Stanford Achievement Test,

an intelligence quotient determined by the Otis-Lennon Mental Ability Test, sex of subject, factor of grade retention, level of grade retention (if any), and occupation of parent. The occupation of the parent was used to determine the level of socioeconomic status by means of the Anne Roe Two-Way Classification of Occupations system.

Research tools used to determine if a significant relationship existed among reading attitude and the above mentioned factors included: a biserial procedure, used to analyze the data relevant to the factors of success or failure, grade retention, level of grade retention, and mental ability as they relate to attitude toward reading; a Pearson product-moment correlation and Spearman rank-difference correlation, used to analyze the data concerning intelligence and attitude toward reading; a point-biserial procedure employed to determine if a significant relationship existed between sex and reading attitude; and a contingency correlation used to determine the relationship between socioeconomic status and attitude toward reading. The findings were: 1. There was a significant correlation between success or failure in reading and attitude toward reading, $p < 0.001$. 2. There was a significant correlation between grade retention and attitude toward reading, $p < 0.001$. 3. There was no significant correlation between level of grade retention and attitude toward reading, z 0.45265. 4. There was a significant correlation between intellectual ability and attitude toward reading, $p < 0.001$. 5. There was a significant correlation between sex and attitude toward reading. Girls held a more positive attitude toward reading than did boys in the 332 subjects studied, $p < 0.002$. 6. There was a significant correlation between socioeconomic level and attitude toward reading, $p < 0.05$.

Based on the results of this study, it was recommended that educators provide a reading program that will ensure the success of each child. Also, it was recommended that more research be conducted in the areas of success and failure, grade retention, and socioeconomic status as they relate to reading attitude.

PROSE MEMORY OF HIGH AND LOW COMPREHENDING READERS: EFFECTS OF REPEATED EXPOSURES

Order No. 7731859

DUNGAN, Rebecca Kirschenman, Ph.D. The Ohio State University, 1977. 135pp. Adviser: Professor Victor M. Rentel

The purpose of the study was two-fold. First, it was designed to add support to the constructivist model of discourse processing, which is based on the premise that one cannot adequately process and store all semantic information under normal conditions of exposure to discourse. Secondly, it was designed to examine the differences between male and female high and low comprehending readers' retelling of a story.

Forty-eight first grade children were asked to listen and retell The Snowy Day by Ezra Jack Keats three consecutive times in one sitting. The subjects comprised four equal groups of twelve. These four groups made up the independent variables, which were high and low comprehending readers, male and female. The subjects' retellings were analyzed by comparing to the original text and coding against ten dependent variables. These dependent variables were divided into two groups; five concept categories and five relation categories. The categories were veridical, overgeneralized, pseudo-discriminated, inferred and elaborated responses.

Information processing, according to the constructivist model, occurs at the stage of acquisition. Because of the limitations on one's ability to process a passage, selective processing must occur. As a result, the listener reduces the presented information by overgeneralizing and making inferences in order to acquire the gist of the passage. These overgeneralizations and inferences, during repeated exposure to text, should remain in the subjects' memory structure and continue to be retold as long as there is new information to be processed.

The results of this study supported this model of discourse and showed that children process information in the same manner as adults. Overgeneralized and inferred responses remained constant or were negatively accelerated over trials while veridical responses increased.

The study also found differences within and between the four groups of children. As predicted, females (both high and low comprehending) gave a greater number of responses of all types over males. Contrary to expected results, there were no significant differences between the responses of high and low comprehending readers (children were classified as high or low comprehending readers according to their scores on the paragraph meaning subtest of the Stanford Achievement Test). The study clearly supported the prediction that repeated exposure to text makes a significant difference in the number of mean retelling responses of first grade children and that overgeneralized and inferred responses remain a part of a childs' memory structure for the story.

A qualitative examination of the subjects' retelling resulted in the conclusion that good order produced good recall; that pausal units are the units of recall and the structural importance of the pausal unit is reflected in recall. Overgeneralizations were an important part of the subjects' retelling, whereas, elaborations were not.

It was concluded that repeated exposure to text is necessary for adequate recall.

AN INVESTIGATION OF THE RELATIONSHIP BETWEEN READING ACHIEVEMENT AND SHORT TERM AUDITORY RETRIEVAL AND STORAGE IN ESEA TITLE I CHILDREN FROM TWELVE D.C. PUBLIC SCHOOLS

Order No. 7801729

EDWARDS, Norma Smith, Ed.D. The George Washington University, 1977. 109pp. Chairperson: Michael Scott Castleberry

Since 1967, billions of dollars have been spent in the establishment of ESEA (Elementary and Secondary Education Act) Title I compensatory education programs. These programs have been directed towards the improvement of reading and mathematical skills of children qualifying for Title I funding. To date, the discrepancies between regular students and Title I students are still of significant concern.

The purpose of this study was to isolate a learning process, short-term auditory memory, to determine the significance of its relationship to the reading process. Short-term auditory memory has been found to be related to an intact central nervous system.

The subjects of the study were 112 black second- and third-grade pupils (ages seven through nine) from 12 ESEA schools in the District of Columbia. The STARS (Short-Term Auditory Retrieval and Storage) Test was used to measure this auditory process.

The major hypothesis was that there would be no difference between the performance of pupils who were high achievers in reading and pupils who were low achievers in reading. This null hypothesis was rejected because the high-level readers performed significantly higher than the low-level readers on the STARS Test.

The results of the data gained from this investigation were not unlike results found from middle-class suburban white populations. The high achievers in this study performed as high achievers did in other studies; the low achievers performed as the low achievers did in other studies. The conclusions from this study positively reinforce the concept that short-term memory and storage is a significant variable in reading achievement.

The literature reviewed substantiated the proposal that irreversible damage to the central nervous system is caused by the lack of adequate nutrition and of adequate prenatal, perinatal, and postnatal care. The literature also supported the need for early criterion-referenced diagnostic tests rather than criterion-referenced achievement tests to determine future program planning for "high risk" or "at risk" children.

Recommendations: 1. The D.C. Public Schools' methods of determining programmatic needs of ESEA Title I students should be evaluated. 2. Methods used to determine programs for "risk" children should include criterion-referenced diagnostic tests such as the STARS Test. 3. Early learning patterns should be identified as part of a routine screening process for "rick" youngsters.

THE NEUROPSYCHOLOGICAL CORRELATES OF READING DISABILITY Order No. 7800924

FAY, Gayle Lee Cunningham, Ph.D. University of Washington, 1977. 120pp. Chairperson: Professor Maurice F. Freehill

This study examines cognitive-neuropsychological differences between children referred to a learning clinic and nonreferred children of similar age, sex, and IQ and further examines differences on the same dimensions between older and younger children. Cognitive-neuropsychological performance is also related to reading competence as elaborated by the miscue analysis.

The referred subjects were 40 children between ages 6.1 and 8.9 with IQs from 83 to 116 who were identified by school personnel as delayed in reading and for whom the performance deficit was confirmed through use of the Spache Diagnostic Reading Scales. The nonreferred subjects were children participating in regular classroom programs matched with the experimental children on sex, age within four months and IQ within 10 points.

Five hypotheses were developed and studied. In the study one hypothesis was supported and four partially supported. Results indicated few cognitive neuropsychological differences existed at significant levels between referred and non-referred and few similarities between referred and one year junior nonreferred with the older children superior on all cognitive measures.

Children reading at the lowest level as measured on the Spache who depended primarily on graphic cues performed poorly on cognitive variables, particularly on the Category Test out of the neuropsychological battery. A stepwise regression of the data placed the Category Test as the most predictive indicator of reading status.

An assessment of findings and implications for further research was developed.

AN INVESTIGATION OF WORD FINDING SKILLS IN CHILDREN WITH LEARNING DISABILITIES AND NORMAL LEARNING CHILDREN Order No. 7732305

GERMAN, Diane J. Newman, Ph.D. Northwestern University, 1977. 276pp.

The focus of this study was to investigate the word finding ability of eight to eleven year old Learning Disability (LD) and Normal Learning (NL) children when retrieving high and low frequency target words in picture naming, open-ended sentences, and naming to description conditions. Indices used to measure word finding differences included mean response time, number of incorrect responses, and types of substitution responses manifested on each condition. The response time analysis indicated that LD children did not take longer to retrieve the target words than did the NL group. However, response time was a function of target word frequency as LD children did take significantly longer than the NL group to retrieve low frequency words in the naming to description condition. Response time was also a function of stimulus context. Subjects manifested the shortest response times on picture naming, trial 2; open-ended sentences next; followed by picture naming, trial 1; and lastly, the longest response times, on the naming to description condition. In regard to number of incorrect responses, LD children made significantly more errors than NL children on the low frequency words in the naming to open-ended sentences and naming to description conditions. Number of errors was also a function of condition as subjects found picture naming, trial 2, the easiest; with picture naming, trial 1, next; followed by open-ended sentences; and lastly, the most difficult, naming to description. Together the results of these two analyses suggest that although LD children may not take longer to retrieve target words, they do appear to have poorer lexicon selection skills on low frequency target words. In addition, both indices were a function of stimulus context suggesting a stimulus dimension operating as part of the retrieval system. These results imply a difficulty order for retrieval tasks which could be significant in identifying linguistic contexts that would support or interfere with word finding skills of LD children. In order to gain some insights into the nature of the substitutions manifested by the LD and NL subjects, a substitution category analysis was also performed. The findings indicated that LD children used significantly more semantically related substitutions and visually related substitutions on the low frequency words than did the NL children. To further analyze the uniqueness of these substitution types for LD children a discriminant function analysis was performed to evaluate if patterns of substitution could be identified as specific to group or condition. The findings indicated that responses visually similar to the target word significantly discriminated the LD group from the NL group in all three stimulus conditions suggesting that LD children may have revisualized the target word in both the intersensory-visual (naming to pictures) and intrasensory auditory tasks (naming to open-ended sentences and naming to description). Other substitution patterns appeared to be a function of the conditions. The occurrence of initial sounds preceding the target word, semantically related substitutions, circumlocutions, and similar function substitutions were specific to the picture naming tasks. The usage of compositional attributes and verb substitutions occurred significantly more in the naming to open-ended sentence task, whereas the occurrence of responses suggesting attention to a part of the stimulus was unique to the naming to description condition. These findings suggest that each of the conditions might be unique in their linguistic demands on the children and that word retrieval in response to visual nonverbal stimuli may be different from word retrieval in response to auditory verbal stimuli.

PIAGETIAN CLASSIFICATION ABILITY AND PERFORMANCE ON CERTAIN READING COMPREHENSION TEST ITEMS: A RELATIONAL STUDY OF THIRD GRADERS
Order No. 7800464

GILLET, Jean Wallace, Ed.D. University of Virginia, 1977. 138pp.

The purposes of this study were to assess the classification ability of a sample of third grade children, to determine if classification ability and performance on certain standardized reading comprehension test items were related, and to determine if such a relationship was evidenced when word recognition ability was controlled.

Five concrete classification tasks designed to assess various levels and operations of classification ability were administered to third graders. In addition, comprehension items from a widely used standardized reading comprehension test were rated by adults for the necessity of using classification for correct response. Selected items representing the extreme ratings were administered to the subjects in a silent reading setting and a listening comprehension setting. An informal test of word recognition in isolation was also administered.

Analysis of variance and covariance and F tests were used to determine the effects of classification ability group, comprehension setting and item type and to test the significance of group mean differences in achievement.

The results of these analyses indicated that there were significant differences between the classification groups in achievement on classification items in the silent reading setting when word recognition was controlled and on all items in the listening setting. Good classifiers had significantly higher achievement on these measures than intermediate and poor classifiers. The results also indicated that predictable developmental stages of acquisition of classification reasoning can be seen in children's performance, a position hypothesized by Inhelder and Piaget.

Conclusions drawn from these findings were that good classifiers have the advantage in responding to test questions which appear to require classification operations, regardless of reading ability, and that the test instrument used yields results confounded by developmental aspects of reasoning apart from reading skill. It was also concluded that better classifiers appear to be better able to process oral language in a comprehension assessment situation than poor classifiers.

WISC-R PATTERNS IN DIAGNOSIS AND REMEDIATION OF LEARNING DISABLED CHILDREN
Order No. 7732411

GORDON, Richard Lawrence, Ph.D. Arizona State University, 1977. 78pp.

The present study attempted to investigate four problems associated with the subject of learning disability (LD). Problem 1, the major focus of the study, assessed the effectiveness of identifying LD children by using Wechsler Intelligence Scale for Children-Revised (WISC-R) subtest patterns. In Problem 2, a comparison of WISC-R subtest patterns was conducted between children diagnosed as having LDs and those classified as slow learners. Problem 3 investigated the intercorrelation of subtests of the Illinois Test of Psycholinguistic Abilities (ITPA) and WISC-R among LD children to determine which subtests of the two instruments were yielding redundant information. Finally, in Problem 4, the WISC-R patterns of children having visual perception problems were compared to those having no problems to try to determine whether significant WISC-R deficit areas could be identified.

Subjects in the study consisted of 217 children, both male and female, ranging in age from 6 to 16 years divided into four groups: LDs (N = 67), slow learners (N = 19), control (N = 60), and gifted (N =71).

The WISC-R was administered to all subjects in the study. The LDs and slow learner groups were also administered a form of the Slingerland Test as well as the ITPA (the ITPA for those between 5 and 10 years of age).

When the WISC-R subtest scores of the LD group were compared with the control group by analysis of variance, the LD children scored significantly lower ($p < .01$) on five of the six verbal subtests. In the performance area, only the subtest of Coding was significantly lower among the LD children. These results were interpreted to mean that LD children as a group can be identified by WISC patterns, and that they show weaknesses in the auditory-verbal realm as well as in perceptual-motor integrative skills.

An analysis of covariance was conducted between LDs and slow learners with no significant differences found. These results were interpreted to mean that both LD and slow learners have similar strengths and weaknesses, and although there exists a quantitative difference between groups in absolute magnitude of scores, qualitatively both groups are quite similar.

A correlation matrix computed between WISC-R and ITPA subtests indicated Full Scale WISC-R IQ scores could be reliably estimated from ITPA scores among LD subjects ($r = .67$). Further subtest breakdown indicated that the ITPA subtests of Auditory Memory, Grammatic Closure, and Auditory Reception correlated to a great extent with several WISC-R subtests. These tests could be omitted from the battery in the interest of saving time.

Finally, a comparison of WISC-R subtest patterns of children having perceptual problems with those having none yielded results showing the problem group to be significantly lower ($p < .05$) on the subtests of Information, Object Assembly, and Picture Arrangement.

Implications based on results of the study were: (1) there is need for a greater emphasis on remediation in the auditory-language area; (2) there is need for special programs for slow learners; (3) it is feasible to omit some ITPA subtests, which provide redundant information, from the test battery.

AN INVESTIGATION TO DETERMINE IF A DIFFERENCE IN MUSCULAR TENSION EXISTS BETWEEN PROFICIENT AND NONPROFICIENT READERS AS MEASURED BY THE ELECTROMYOGRAPH
Order No. 7801553

GREEN, Cynthia Anne, Ed.D. Baylor University, 1977. 83pp.
Major Professor: Dr. Bill D. Lamkin

PURPOSE: The purpose of this study was to determine if a difference in muscular tension exists between students reading above their anticipated achievement grade equivalent (AAGE) reading level and students reading below their AAGE reading level as measured by the electromyograph.

SAMPLE: The sample consisted of one hundred thirty-two selected second, third, fourth, and fifth grade students from McGregor Independent School District. Criteria for selection of Ss were: (1) having taken the California Achievement Test (CAT) and the Short Form Test of Academic Aptitude (SFTAA), (2) obtaining an intelligence quotient greater than eighty-four on the SFTAA, and (3) achieving a difference $\geq +0.5$ between the achievement score and the AAGE score, or a difference ≤ -0.5 between the achievement score and the AAGE score on the CAT. Written parental permission was mandatory for participation in the study.

PROCEDURE: Four three-minute selections were read by each S while being monitored with an EMG. The selections were read alternately orally and silently. The first two selections had a readability that corresponded with the S's achievement score on the CAT. The second two selections had a readability that corresponded with the S's AAGE score on the CAT.

ANALYSIS: Analysis of the data was made using the computer program entitled Biomedical Diagnosis Program-Second Analysis of Variance (BMDP2V). The procedure involved the computation of the analysis of variance and covariance to compare the differences in variation and mean tension levels between and within second, third, fourth, and fifth grade students; males and females; Caucasians, Blacks, and Hispanics; and proficient readers and nonproficient readers. Differences were considered to be significant if probability was less than the .05 level of significance, using the appropriate degrees of freedom.

FINDINGS: The major findings were: (1) The mean tension level of Ss reading above their AAGE level and Ss reading below their AAGE level did not vary significantly between proficient and nonproficient readers. (2) The mean tension level of Ss reading orally and silently did not vary significantly. (3) The mean tension level of Ss did not vary significantly when Ss read at achievement level and AAGE level. (4) The variation in tension did not vary significantly between proficient and nonproficient readers.

CONCLUSIONS: It was concluded that (1) the tension of a proficient reader does not differ from that of a nonproficient reader, and (2) no valid generalizations can be drawn between the tension of second, third, fourth, and fifth grade students; males and females; Caucasians, Blacks, and Hispanics; and proficient readers and nonproficient readers because of a nonsignificant level of correlations.

CONCEPT ATTAINMENT AND READING ACHIEVEMENT IN NORMAL, DISADVANTAGED AND HIGH RISK FIRST GRADE CHILDREN Order No. 7800494

HENKIN, Paul Henry, Ph.D. Saint Louis University, 1977. 68pp.

The correlation of the Boehm Test of Basic Concepts with reading achievement was investigated as no conclusive research was available on this instrument. Selected factors relating to reading achievement that were studied included vocabulary, comprehension and a composite score. Other factors in the study investigated were (1) the comparison between normal, disadvantaged and high risk first grade children on concept attainment and reading achievement and (2) the role of sex upon concept attainment and reading achievement in normal and disadvantaged first grade children.

Subjects were 50 first grade children, 20 normal, 10 male and 10 female, 20 disadvantaged, 10 male and 10 female, and 10 high risk, 7 male and 3 female. All subjects were administered the Boehm Test of Basic Concepts, Form A and the Gates-MacGinitie Reading Test Primary A, Form I. A matrix of intercorrelations of concept attainment and reading achievement was computed to explore these relationships. Differences between the mean performances of the variables of concept attainment and reading achievement were analyzed by means of Student's t test on the subgroups and also by sex.

Results of the investigation indicated a positive correlation between concept attainment and reading achievement in the total sample and among the sub-groups.

Significant differences were found between normal and disadvantaged and high risk children in that the latter two groups are deficient in concept attainment and reaching achievement. Teaching of concepts is something to be included in the curriculum that would be warranted for these groups.

A significant relationship between normal male and normal female concept attainment and reading achievement was supported. No sex differences were found between disadvantaged males and females.

AN INVESTIGATION OF THE COGNITIVE, ENVIRONMENTAL AND PERSONAL DIFFERENCES IN THE READING PERFORMANCE OF PRESCHOOL CHILDREN Order No. 7731893

HOLLINGSWORTH, Shirley Jean, Ph.D. The Ohio State University, 1977. 173pp. Adviser: Professor Victor M. Rentel

Purpose

The purpose of this study was to examine the relationship of cognitive, environmental, and personal factors to the acquisition of reading skills in unschooled, preschool children.

Procedures

Subjects for this study were 60 attendees ages 5.0 to 6.7 from Columbus, Ohio Day Care Centers. Raw scores from PIAT provided five separate criteria: letters matched, alphabet named, words read, sentences comprehended and total raw score. Cognitive ability was determined by administration of the verbal subtest of the Wechsler Primary and Preschool Scale of Intelligence (WPPSI), Concept Assessment Kit--Conservation, Concepts About Print, and Taking Inventory of Children's Literary Background. The child's initiative in reading and writing was determined by means of a parent questionnaire. The criterion, reading achievement, was determined by administration of the Peabody Intelligence Achievement Test (PIAT). Predictors were measures of 1) cognitive maturity and attainment; 2) child initiative; 3) television viewing; 4) socioeconomic status; and 5) personal variables. Television viewing data also gleaned from the parent questionnaire, covered total hours watching television and both the Electric Company and Sesame Street. Socioeconomic status was ascertained using parent's education, father's occupation, time spent by parent reading to the child, and the number of magazines and books in the home. Sex and age were the personal variables.

The tests used were subjected to reliability determination. The data were submitted to correlational analysis, factor analysis, multiple linear regression analysis.

Findings

The data collected in this study justified the following statements: 1. Reliability of the instruments administered ranged from .715 to .974. 2. Concepts About Print reached .001 significance level for all criteria, with coefficients ranging from .456 to .681. 3. Literary Background attained significance at p. 05 with all criteria except Letter Matching. 4. Conservation correlated p. 001 with Words Read p. 01 with Sentences Read and p. 001 with Total Correct on PIAT with r's ranging from .413 to .466. 5. Verbal IQ (WPPSI) reached the p. 05 significance level only with Words Read and Total Correct. 6. Two Clusters emerged, 1 composed of Letter Matching/Alphabet Naming, and another of Words Read/Sentences Comprehended. Thus the criterion was found to function as a bifurcated dependent variable. The two clusters formed two factors which shared few predictors. 7. The importance of early writing attempted to the acquisition of beginning reading skills was documented. 8. Each reading criterion had a relationship with Sex indicating a higher reading attainment at the various levels by females.

Conclusions

The following conclusions were reached as a result of this study.

Two distinct clusters became apparent in the correlation analysis and were more effectively described through the factor analysis. The two clusters appeared to be two separate stages toward reading attainment, each having separate behavioral and environmental components and each indicating the attainment of a unique higher order structuring.

Stage I was distinguished by attention to individual letters. A covert mastering of the rule system necessary for the establishment of the concept of invariance. Overtly, it was found to be distinguished by activities involving letters: matching, naming, attempting to write and spell. Magazines in the home, writing materials, and the viewing of The Electric Company were concomitant with this mastery.

Stage II was distinguished by a transfer of the rule--extracting behavior to the larger components of words and sentences.

Overtly, it was distinguished by a knowledge of children's literature, and interest at looking at books and checking them out of the library. Most who attained this stage were conservers.

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